

RESEARCH NOW

Chromium-Methionine Complex Improves Hatchability of Japanese Quail (Summer)

Introduction:

Previous research has indicated positive performance responses from supplementing chromium-methionine complex (Cr-Met) to Japanese quail. This experiment was to determine the effect of Cr-Met supplementation on hatchability of Japanese quail, during the summer season.

Trial Design & Duration:

- 1280 Japanese quail breeders (960 female, 320 male)
- 160 groups
- Randomly assigned 8 birds/group (6 female, 2 male)

Treatments:

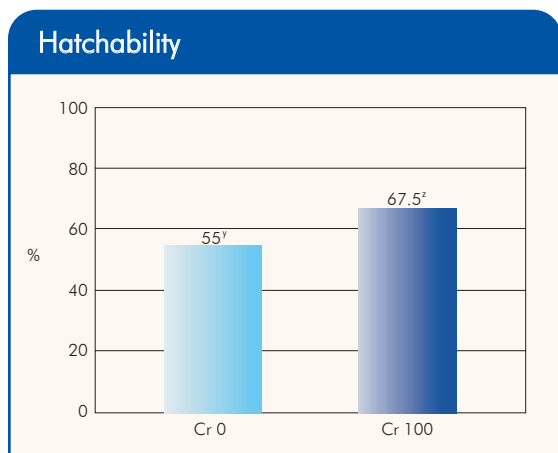
- 0 ppb Cr (Control)
- 100 ppb Cr (Cr 100)
- 200 ppb Cr (Cr 200)
- 400 ppb Cr (Cr 400)

Conclusion:

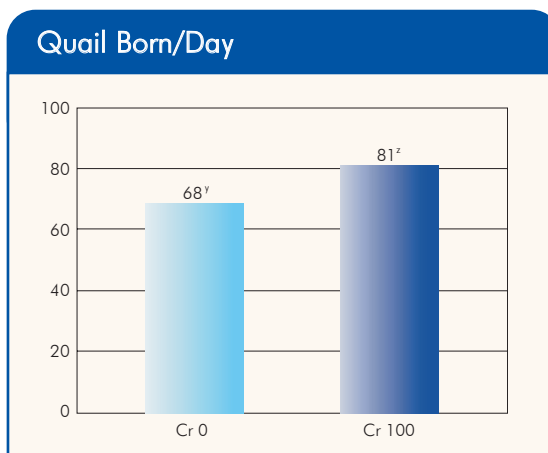
- Chromium-methionine, supplemented at 100 ppb improved hatchability of new born Japanese quail, during the summer season.

Results:

- Hatching averaged 78% and was not affected by Cr treatment ($P > 0.20$)
- Cr 100 increased ADFI vs. all other treatments ($P < 0.05$)
- Cr 100 increased the number of newly born quail/day by 19% (81 vs. 68) vs. Control ($P < 0.05$)
- Cr 100 increased hatchability by 22% (67.5 vs. 55%) vs. Control ($P < 0.05$)



^{y,z} $P < 0.05$



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ABSTRACT

1339 Effect of Chromium-Methionine Level in Diet on Hatchability of Japanese Quail in Dry Tropic Weather:I. Response Under Temperature-Controlled in Summer Season. G. Contreras*¹ and R. Barajas¹. ¹ *Universidad Autonoma de Sinaloa.*

To determinate the effect of chromium-methionine level in diet on hatchability of Japanese quail in dry tropic weather under temperature-controlled in summer season, a completely randomized design experiment was conducted. One thousand two hundred eighty Japanese quail (960 females and 320 males) were divided into 160 groups of eight (six females and two males), and were allocated in wire cages (25 x 30 cm); groups of four cages (32 quails) formed an observation. The avian were randomized assigned to consume diets (21% CP; 2.9 Mcal DE/kg), in that consist the treatments, containing one of four levels (0, 100, 200 and 400 ppb) of supplemental chromium from chromium-methionine (MiCroPlex®, Zinpro Corp, MN). Chromium 100 ppb increased ($P < 0.05$) the average daily feed intake with relation of the remainder treatments (36.9 vs 36.3 g/day). The hatching was not affected ($P > 0.20$) by treatments (mean value=78%); egg hatching was similar ($P > 0.20$) across treatments (66%). Supplementation with level of 100 ppb of Cr increased ($P > 0.05$) in 19% of the number of newly born quails by day (81 vs 68), and hatchability in 22% (55 vs 67.5%) with respect to control (Cr 0 ppb). Levels of 200 and 400 ppb tended ($P = 0.11$) to decrease in 18% of the number of newly born quails by day (68 vs 56) respect to control. Chromium 200 and 400 ppb had similar ($P > 0.20$) hatchability than control (55 vs 46%). It is concluded that 100 ppb of supplemental Cr from Cr-Met improve hatching and newly born quails by day of Japanese quail in dry tropic weather under temperature-controlled in summer season.

Key Words: Japanese quail, Chromium, Hatchability

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